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10/820,636	04/08/2004	Sridhar Ranganathan	17,872	8821

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EXAMINER

GIBSON, KESHIA L

ART UNIT	PAPER NUMBER
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3761

DATE MAILED: 04/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/820,636

Applicant(s)

RANGANATHAN ET AL.

Examiner

Keshia Gibson

Art Unit

3761

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,7-15,17-22 and 24-43 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,3,7-15,17-22,24-43 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date ____; | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, see page 11, filed 1/10/06, with respect to the rejections of Claims 7-8 and 18-19 under 35 USC 112, first paragraph have been fully considered and are persuasive. The 35 USC 112, first paragraph rejections of Claims 7-8 and 18-19 have been withdrawn.
2. Applicant's arguments filed 1/10/06 have been fully considered but they are not persuasive.
3. Applicant disagrees with Examiner's statement that the specification is not enabled for an infinite fluid intake rate and has further addressed the implications associated with an infinite intake rate. Regardless of whether or not such implications may be accurate, it still remains the claimed invention has not provided adequate enablement for fluid intake rates beyond 5 cubic centimeters per second. The specification and examples therein only provide for an absorbent structure with a fluid intake rate of up to 5 cm³/s. Is the claimed invention enabled for a fluid intake rate of 6 cm³/s? of 10 cm³/s? of 50 cm³/s? This is currently unclear from the specification and examples provided therein. As such, the range of "about 0.5 cm/s or greater" is still considered to have been non-enabled by the specification.
4. Applicant has argued that the cited prior art does not disclose a single-layer absorbent structure. However, the structures are bonded together and may therefore be considered single-layered composites. Additionally, it would have been obvious to one

of ordinary skill in the art to modify multiple layers to provide them as a single layer, since it has been held that forming one piece of an article which has formally been formed in two pieces and put together involves only routine skill in the art. *Howard v. Detroit Stove Works*, 150 U.S. 164 (1893).

5. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., the insert curves when wet, due to expansion of one surface relative to another) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). The recitation of "in the presence of liquid" does not equivocate to "when wet," does not provide for what quantity of liquid must be present (could be a drop or could be an amount that causes the material to become supersaturated), does not result in a cause-and-effect relationship between the expansion of the material and the presence of a liquid; the recitation only requires that the event occurs in the presence of a liquid,—not as a result of it.

6. Applicant has argued that because the layers of Gertzman are of the same polymer—polyvinyl acetal, polyvinyl acetal has a capacity to absorb up to 25 times its weight, and the figures of Gertzman illustrate that both layers expand substantially more than 10%, the claimed invention is patentable over Gertzman. However, even though the layers may both comprise polyvinyl acetal, the layers are provided with varying different chemical or mechanical properties, such as pore size and density, and result in

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different structural properties. Gertzman expressly discloses that the layers have different swelling rates to result in curling of the article. Additionally, the ability for polyvinyl acetal to absorb up to 25 times its weight does not mean the mechanical and chemical properties provided it will not result in a certain percentage of expansion. Absorption is a different property than expansion—although one may affect the other. Furthermore, when the reference does not disclose that the drawings are to scale and is silent as to dimensions, arguments based on measurement of the drawing features are of little value. *Hockerson-Halberstadt, Inc. v. Avia Group Int 'l*, 222 F.3d 951, 956, 55 USPQ2d 1487, 1491 (Fed. Cir. 2000) *In re Wright*, 569 F.2d 1124, 193 USPQ 332 (CCPA 1977). Further see MPEP 2125.

7. In regard to arguments concerning the expansion of Olson, the broadest reasonable interpretation of “expansion” includes expansion in any of the length, width, or height dimensions, as further supported by applicant’s definition (spec, p. 6). In the article of Olson, one surface is less extensible than the other; therefore, one expands less than the other. All other arguments concerning Olson are similar to those in regards to Gertzman and therefore have been previously addressed above.

8. Despite applicant’s arguments, Gertzman and Olson are still considered to anticipate and/or render obvious the structural limitations set forth in the claimed invention, as presented in the previous Office Action (which has been modified and presented again, in view of applicant’s amendments, below).

Claim Rejections - 35 USC § 112

9. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

10. Claims 1-15, 17-22, and 24-43 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a fluid intake rate of up to 5 cc/s (page 10), does not reasonably provide enablement for a fluid intake rate of about 0.5 cubic centimeters or greater. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims. A fluid intake range of about 0.5 cubic centimeters or greater would include any intake rate between 0.5 and infinity; the specification is not enabled to an infinite number of fluid intake valves.

Claim Rejections - 35 USC § 102

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

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the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 1, 3, 7-8, 10-15, 21 and 41 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Gertzman et al. (US 5,460,621).

In regard to Claims 1, 8, 15 and 41, Gertzman et al. disclose an absorbent structure 10 comprising a first surface 16 and a second surface 14. The first surface 16 expands to a lesser extent than the second surface 14; and, properties of the materials result in the structure having an overall concave shape in the presence of fluid (Fig. 2; column 4, lines 46-65; column 3, lines 30-40). The first 16 and second 14 surfaces are secured together so as to form a one-layer composite (column 4, lines 8-12). Thus, the absorbent structure 10 comprises a single layer of absorbent material. Gertzman et al. does not expressly disclose a specific thickness. However, Gertzman et al. do disclose that modifications desired swelling can be achieved by judicious selection of thickness (column 6, lines 7-13). Thus, it would have been obvious to one of ordinary skill in the art to provide the structure with a specific thickness, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Gertzman et al. do not expressly disclose that the absorbent structure has a specific fluid intake rate, a specific radius of curvature for the absorbent structure, or at least one surface that undergoes anisotropic expansion. When the structure or composition recited in the reference is substantially identical to that of the claims of the instant invention, claimed properties or functions presumed to be inherent (MPEP 2112-

2112.01). A prima facie case of either anticipation or obviousness has been established when the reference discloses all the limitations of a claim (in this case, an absorbent structure that expands) except for a property or function (in the present case, a specific fluid intake rate a specific radius of curvature for the absorbent structure, or a surface that undergoes anisotropic expansion) and the examiner can not determine whether or not the reference inherently possesses properties that anticipate or render obvious the claimed invention but has a basis for shifting the burden of proof to applicant, as per *In re Fitzgerald*, 619 F.2d 67, 205 USPQ 594 (CCPA 1980). Furthermore, performing the disclosed test procedures to derive at the claimed test results is considered to be a product-by-process limitation. The process of performing is part of the method of producing the claimed invention. The method of forming the device is not relevant to the issue of patentability of the device itself. Therefore, this limitation has been given little patentable weight.

In regard to Claim 3, the absorbent structure 10 comprises sponges (equivalent to foams) made from polyvinyl acetal polymers by methods described in US 4,098,728 (issued to Rosenblatt) (column 4, lines 12-15). In US, 4,098,728, Rosenblatt discloses a method for making a sponge by reacting a polymer (polyvinyl alcohol) in an aqueous solution having air bubbles dispersed within the solution (column 4, lines 40-53). As defined by Merriam-Webster dictionary, foam is "a material in a lightweight cellular form resulting from introduction of gas bubbles during manufacture." This supports the examiner's earlier reference to the sponges being equivalent to foams. Rosenblatt further discloses that the frothy mass produced by the reaction is then cured in a mold

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at elevated temperatures (column 4, lines 62-64). As supported by the On-Line Medical Dictionary (<http://cancerweb.ncl.ac.uk/omd/>), a thermoset is "a classification of materials that become hardened or cured by the application of heat." Thus, Gertzman et al. disclose that the absorbent structure 10 comprises thermoset foam.

In regard to Claims 7, in Fig. A below, the structure 10 of Gertzman et al. is marked up based on examiner's understanding of "subtended angle." As can be seen in Fig. A, the absorbent structure 10, has a subtended angle of about 180 degree or less.

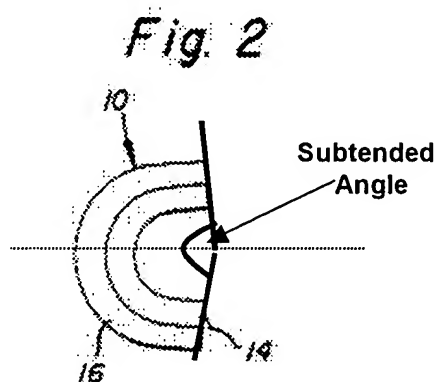


Fig. A: Examiner's markup of Gertzman's Fig. 2 to identify subtended angle.

Furthermore, this property is considered to be inherent based on the same structure/same property as provided in the discussion of Claim 1.

In regard to Claims 10-14, Gertzman et al. disclose that the any or all layers of the absorbent structure 10 may be fully or selectively, mechanically compressed so as to delay the volumetric expansion of one layer in relation to the other (column 5, lines 7-19). As discussed for Claim 1, Gertzman et al. disclose that the first surface 16 expands

to a lesser extent than the second surface 14. Thus, Gertzman teaches that the first surface 16 may be treated to expand less in the presence of liquid relative to that of the second surface 14. Mechanical compression has been considered equivalent to mechanical teasing and densification.

In regard to Claim 21, polyvinyl acetate foam is elastomeric, as supported by Takahashi (US 3741388, column 3, lines 20-34).

14. Claims 1, 3, 7, 10, 12-15, and 41 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Olsen et al. (US 5,591,150).

In regard to Claims 1, 7-8, 15, and 41, Olsen et al. disclose an absorbent structure/article 20 comprising a topsheet 38, backsheet 40, absorbent core 42, and an insert 44; the absorbent core 42 and the insert 44 are disposed between the topsheet 38 and backsheet 40 (column 6, lines 43-53). Olsen et al. further disclose that insert 44 may be placed above the absorbent core (as opposed to being placed below the core as previously depicted in Fig. 4) (column 12, lines 10-13; column 25, lines 17-20). Hereafter, any references to "Fig. 4-inversed" will be done with the understanding that the absorbent core 42 and the insert 44 have been interchanged in accordance with such an arrangement. The insert 44 is considered analogous to a first surface and the absorbent core 42 is considered analogous to a second surface. The first surface 44 may expand to a lesser extent than the second surface 42 (column 25, lines 17-32). The second surface 42 arcs towards the first surface 44 (Fig. 4- inversed; column 10, lines

40-65). The properties of the materials result in the structure having an overall concave shape (in relation to the garment-facing surface of the article) in the presence of fluid (Fig. 4- inversed; column 10, lines 40-65).

Gertzman et al. does not expressly disclose a specific thickness. However, the thickness of the structure affects the expansive properties of the structure; as such, it is considered to be a result effective variable (column 6, lines 7-13). Thus, it would have been obvious to one of ordinary skill in the art to provide the structure with a specific thickness, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). Olsen et al. disclose that the first 44 and second 42 layers may be formed integrally (column 12, lines 9-13; column 18, lines 7-11). This would result in a single layer of absorbent material.

Olsen et al. do not expressly disclose that the structure has a specific fluid intake rate, a specific radius of curvature for the absorbent structure, a subtended angle of about 180 degrees, a specific subtended angle, or at least one surface that undergoes anisotropic expansion. However, when the structure recited in the reference is substantially identical to that of the claims of the instant invention, claimed properties or functions presumed to be inherent (MPEP 2112-2112.01). A prima facie case of either anticipation or obviousness has been established when the reference discloses all the limitations of a claim (in this case, an expanding absorbent structure) except for a property or function (in the present case, a specific fluid intake rate, a specific radius of curvature for the absorbent structure, a specific subtended angle, or that one of the

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surfaces undergoes anisotropic expansion) and the examiner can not determine whether or not the reference inherently possesses properties that anticipate or render obvious the claimed invention but has a basis for shifting the burden of proof.

Furthermore, performing the disclosed test procedures to derive at the claimed test results is considered to be a product-by-process limitation. The process of performing is part of the method of producing the claimed invention. The method of forming the device is not relevant to the issue of patentability of the device itself. Therefore, this limitation has been given little patentable weight.

In regard to Claim 3, suitable materials for the first surface 44 include meltblown webs, airlaid web, and synthetic foams (column 6, line 44-column 17, line 32); suitable materials for the second surface 42 include cellulose wadding, absorbent foams, superabsorbent polymers, and combinations thereof (column 8, line 27-column 9, line 26).

In regard to Claims 10 and 13, Olsen et al. disclose that the first surface 44 may comprise a selective stiffner (a portion having regions of different stiffness) to affect bending (or expansion) of the article (column 21, line 65-column 22, line 39). Inherently, increased stiffness results in reduced extensibility. Thus, at least one of the first and second surfaces 46, 44 comprises at least one region of reduced expansion.

In regard to Claim 12, the first surface 44 can have slits (column 25, lines 48-52). Thus at least one of the surfaces 42, 44 comprises at least one slit capable of control shaping.

In regard to Claim 14, Olsen discloses that the stiffening is done by heat treatment (column 22, lines 29-31).

15. Claim 43 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Abbas et al. (WO 01/15649).

In regard to Claim 43, Abbas et al. disclose an absorbent structure comprising a first elastomeric layer 3 and a second layer 4 that expand when contacted by liquid. Abbas et al. discloses that the layers expand differently but do not expressly disclose the percentage by which the layers are to expand. When the structure recited in the reference is substantially identical to that of the claims of the instant invention, claimed properties or functions presumed to be inherent (MPEP 2112-2112.01). A prima facie case of either anticipation or obviousness has been established when the reference discloses all the limitations of a claim (in this case, an expanding absorbent structure comprising both an elastomeric and a non-elastomeric layer) except for a property or function (in the present case, a specific percentage of expansion and an increase in concavity of an interfacing surface) and the examiner can not determine whether or not the reference inherently possesses properties that anticipate or render obvious the claimed invention, but has a basis for shifting the burden of proof.

Furthermore, performing the disclosed test procedures to derive at the claimed test results is considered to be a product-by-process limitation. The process of performing is part of the method of producing the claimed invention. The method of forming the

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device is not relevant to the issue of patentability of the device itself. Therefore, this limitation has been given little patentable weight.

16. Claims 9, 17-20, 22, 24-25, 28-29 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gertzman.

In regard to Claims 9, 17, 22, and 42, Gertzman et al. disclose the claimed invention (as discussed for Claim 1) but do not disclose a specific basis weight for the structure or its layers or the percentage by which the layers expand. However, the basis weight of the structure and the percent of expansion of its layers affect the overall expansion of the article and its expansion, as supported by Costa (US 20050096619, [0070]). Thus, it would have been obvious to one of ordinary skill in the art to provide the structure or its layers with a specific basis weight or percentage of expansion, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). (Also see previous discuss of claim 1.)

In regard to Claims 18-20, 24-25, and 28-29, see previous discussion for Claims 1, 5-8 and 13-14.

17. Claims 9, 17-20, 22, 24-40 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Olsen et al.

In regard to Claims 9, 17, 22, 30, 38, and 42, Olsen et al. disclose the claimed invention (as discussed for Claim 1) but do not disclose a specific basis weight for the structure or

its layers or the percentage by which the layers expand. However, the basis weight of the structure and the percent of expansion of its layers affect the overall expansion of the article and its expansion, as supported by Costa (US 20050096619, [0070]). Thus, it would have been obvious to one of ordinary skill in the art to provide the structure or its layers with a specific basis weight or percentage of expansion, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

In regard to Claims 18-20, 24-25, and 27-29, see previous discussion for Claims 1, 7-8, and 12-14.

In regard to Claim 26, the second layer may comprise a superabsorbent material (column 8, line 27- column 9, line 4).

In regard to Claim 31-36, see discussion of Olsen for Claims 1, 3 and 10.

In regard to Claim 37, as discussed for Claim 14, Olsen discloses that the stiffening is done by heat treatment (column 22, lines 29-31).

In regard to Claims 39-40, the article 20 relates to absorbent articles such as sanitary napkins, pantliners, and incontinence pads, all of which are personal care absorbent articles (abstract; column 1, lines 39-47). Furthermore, it has been held that a recitation with respect to the manner in which a claimed invention is intended to be employed does not differentiate the claimed invention from a prior art satisfying the claimed structural limitations. *Ex parte Maham*, 2 USPQ2d 1647 (1987). *In re Paulsen*, 30 F.3d 1475, 31 USPQ 2d 1671 (Fed. Cir. 1994).

Conclusion

18. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Keshia Gibson whose telephone number is (571) 272-7136. The examiner can normally be reached on M-F 8:30 a.m. - 6 p.m., out every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tatyana Zalukaeva can be reached on (571) 272-1115. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Keshja Gibson
Examiner
Art Unit 3761

klg 3/30/06

TATYANA ZALUKAEVA
PRIMARY EXAMINER

